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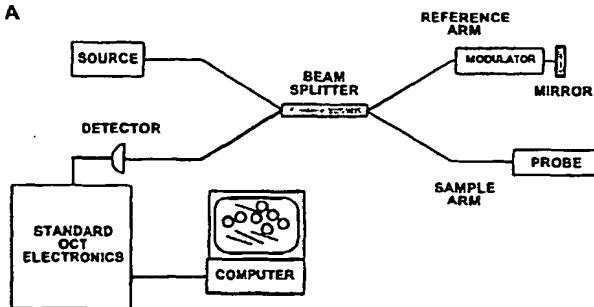
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(54) Title: APPARATUS FOR LOW COHERENCE RANGING

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(57) **Abstract:** An apparatus for performing low coherence ranging of a sample with high transverse resolution and large depth of focus, comprising an optical ranging system comprising a light source, a means for directing light from the light source to the sample, a means for directing reflected light from the sample to a detector, at least one detector, a means for processing light data received by the detector and which generates an image; and an optical element having a transverse resolution defined as Δr is less than or equal to about 5 μm , and a depth of focus Δz of at least about 50 μm .